IDAHO STATE DEPARTMENT OF AGRICULTURE (ISDA)
DIVISION OF PLANT INDUSTRIES
BUREAU OF FEEDS AND PLANT SERVICES
2004 PEST SURVEY, NURSERY AND FIELD INSPECTION SUMMARY

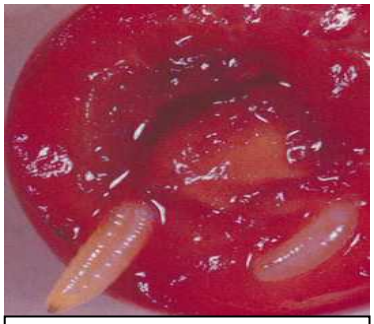
APPLE MAGGOT (AM) (*Rhagoletis pomonella* Walsh) - In 2004, 504 traps were placed at 304 sites in seven counties (Boise, Bonner, Canyon, Gem, Owyhee, Payette, and Washington) in and around the commercial apple production areas of each county. The major tree fruit production areas of Payette, Canyon and Owhyee counties had negative trap data, building on a multi-year record of being AM-free. An AM-free zone was established by rules (IDAPA 02.06.08) under the authority of Title 22, Chapter 20, Idaho Code. Based on 2002 and 2003 survey results, ISDA placed 123 traps in Washington County. AM traps were placed in three host trees - apple, crabapple and hawthorn. Higher density detection surveys targeted the Mann's Creek area and parts of the Weiser river watershed north of the town of Weiser. Three positive traps occurred in Washington County. Of these sites, three were **outside** of the AM-free zone and one positive site was recorded **within** the AM-free zone. Washington County survey results showed AM catches decreased from an average of 4 AM per trap in 2003 to 1 insect per trap in 2004. The duration of trapping in 2004 was 146 days. Positive trap catches of adult AM were observed south of the Mann's Creek store, but still within a 1-2 mile radius of the positive AM trap catches recorded during the 2003 season. The Washington County Abandoned Orchard Review Board, University of Idaho, Washington County Extension Office, and the Idaho State Department of Agriculture (ISDA) is currently working with the affected homeowners to control the pests or to remove the host material. Identifications are made through genitalia dissections performed by University of Idaho insect taxonomist, Mr. Frank Merickle, at the WFBARR Entomological Museum in Moscow, Idaho under the direction of Dr. James D. Johnson. All orchards and trap sites were plotted using Geographic Information System (GIS) and Global Positioning System (GPS) technology. ISDA plans to conduct follow-up surveys in this area in 2005. An historical summary can be found on the ISDA website at http://www.idahoag.us under Plants and Insects, Regulated and Invasive Insect Pests.

Apple Maggot Three-Year Survey Data Summary
Washington County, 2002 - 2004

Year	Total # sites	Total # traps	Total Positive Traps	% positive traps	Total AM Adults Caught	Average # AM per positive trap
2002	28	46	4	8.6	9	2
2003	61	121	10	8.3	42	4
2004	60	123	3	2.4	4	1

***CEREAL LEAF BEETLE (CLB) (*Oulema melanopus* (Linnaeus)) – CLB was detected in Lewis, Nez Perce and Latah counties for the first time in 2004.** Five fields were surveyed in Benewah County, but no CLB was detected. Shoshone and Clearwater county surveys were also negative. Biocontrol agent releases were made of the larval parasite, *Tetrastichus julis*, at one site in Kootenai County outside of Post Falls. A new establishment record for this biological control agent was recorded in Boundary County in 2004. A survey

conducted on June 23, found a *T. julis* parasite level of 8% in the CLB larval sample from that county. A larval sample collected June 24, from a wheat field in Canyon County, near Kuna, had a *T. julis* parasite level of 56%. A field insectary for the egg parasite, *Anaphes flavipes,* was initiated this spring at the University of Idaho, Southwest Idaho Research and Extension Center, in Parma, in cooperation with the University of Idaho and USDA, PPQ. Four releases of egg parasites shipped in from the USDA Niles Lab were made during the peak CLB egg-laying period (April 27, May 11, May 19, and May 26). Follow-up surveys will be conducted in the spring of 2005 to determine if the egg parasite was successfully established in the insectary field. Maps showing Idaho counties positive for CLB and *T. julis* larval parasite establishment are located on pages 25 and 26.



CFF Larvae in a pitted cherry

WESTERN CHERRY FRUIT FLY (CFF) (*Rhagoletis indifferens* Curran) - ISDA implements a trapping program to detect first emergence and tracks degree-day accumulation calculations for the western cherry fruit fly. The California Department of Food and Agriculture requires this for compliance with their Western Cherry Fruit Fly Quarantine for states wishing to export fresh sweet cherries to, or through, California. Fruit flies were first caught at sites in Gem County and Canyon County on May 25, 2004. A degree-day model is also used to supplement the trapping program. The dates that the 1060 degree-day accumulation were met or exceeded over the past few years is summarized in the table below. Electronic notification was sent out with cooperation from the University of Idaho and the Treasure Valley Pest Alert Network Web Site. The degree-day calculations are made from the Oregon State University, Department of Entomology degree-day computer model. Control applications are recommended on, or prior to, 1060 degree-day accumulations according to the publication, "Orchard Pest Management" as published by the Good Fruit Grower, Yakima, WA 1993.

Western Cherry Fruit Fly Degree Day Accumulations 1998-2004 (1060 Degree Days)

Site	2004 Forecast First Adult Emergence	2004 Forecast 1st Treatment Recommended 1060 degree-days	2003	2002	2001	2000	1999	30 Year Average
Boise	May 12	May 25	June 3	June 6	June 5	June 2	June 16	June 9
Caldwell	May 14	May 23	June 4	June 3	June 3	May 31	May 28	May 31
Emmett	May 12	May 23	Jun 5	N/A	N/A	N/A	N/A	N/A
Nampa	May 9	May 21	June 3	June 6	June 1	June 1	June 14	June 8
Payette	May 7	May 18	May 29	N/A	N/A	N/A	N/A	N/A
Parma	May 8	May 20	May 31	June 8	May 24	May 22	May 31	June 9
Weiser	May 7	May 19	June 2	N/A	N/A	N/A	N/A	N/A

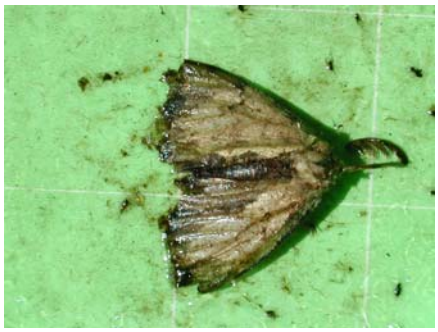
European pine shoot moth pictures used with permission. Copyright 1999. Jack DeAngelis, Oregon State University, All rights reserved.

EUROPEAN PINE SHOOT MOTH (EPSM) (*Rhyacionia bouliana* Denis & Schiffermuller) - In 2004, detection surveys were carried out only in areas of the state where this insect is not known to occur, based upon risk, accessibility and presence of suitable host material. There were 161 traps placed at 54 sites in 22 counties. Adult moth emergence can be expected around the first week of June. This survey is performed to track EPSM's movement within the state for compliance with California, Montana, and Nevada quarantines. Six nurseries were trapped for compliance with the California EPSM quarantine. The EPSM is a pest of most *Pinus* spp. In Idaho, it is most commonly found on Mugo pine in ornamental situations. A map showing Idaho counties positive for EPSM is located on page 24.

***GYPSY MOTH (GM) (*Lymantria dispar* (Linnaeus)) - Section Report provided by Gretchen Lech and R. Ladd Livingston, Idaho State Department of Lands, Coeur d'Alene, Idaho**

ABSTRACT:
In 2004, one gypsy moth was captured in Idaho. This moth was determined to be of the Asian strain (AGM). The moth was caught in a detection trap in North Idaho near Hauser Lake, in Kootenai County. No delimitation or mass trapping was conducted in 2004. Surveys to detect the introduction of the gypsy moth, *Lymantria dispar L*., have been conducted in Idaho each year since 1974 (Table 1).

2004 SURVEY:
Detection Trapping - In 2004, the cooperating agencies in the Idaho gypsy moth detection program placed 5,875 detection traps throughout the state (Table 2). Table 3 shows trap placement by county. Pheromone-baited traps were placed on a grid basis at a density of approximately four traps per square mile. Traps were placed throughout the state in cities, towns, surrounding urban areas, and rural communities in accordance with a predetermined rotation schedule. Cities and communities where 20 or more move-ins occurs are trapped irrespective of their place in the schedule. A move-in is defined as an individual or family moving to Idaho from a state that is generally infested with gypsy moths. This information is derived from vehicle registration information supplied on a monthly basis by the Idaho Department of Transportation. Most infestations are initiated when an egg mass or other life stage of the gypsy moth arrives on an outdoor household article brought by someone moving into the area. Between May 2003 and April 2004, there were 8,922 move-ins to the state, a 13% decrease over the previous year. Campgrounds, tourist attractions, and other high-risk locations were also trapped. Trapping will also be adjusted accordingly based upon relative risk of AGM introductions.



Delimitation Trapping – No delimitation trapping was conducted in Idaho in 2004.

Mass Trapping – No mass trapping was conducted in Idaho in 2004.

Life Stage Survey- In October and November of 2004, an intensive survey was conducted in the area surrounding the AGM capture site for evidence of gypsy moth life stages. This survey was negative, and no further evidence was found.

2005 Season- Delimitation traps will be placed in a 5-mile radius surrounding the AGM capture site during the 2005 trapping season. These traps will be at an approximate density of 25 traps per square mile. In addition, based upon the recommendation made by a Science Panel convened by APHIS, next year's trapping season will include an eradication project encompassing approximately 640 acres surrounding the capture site.

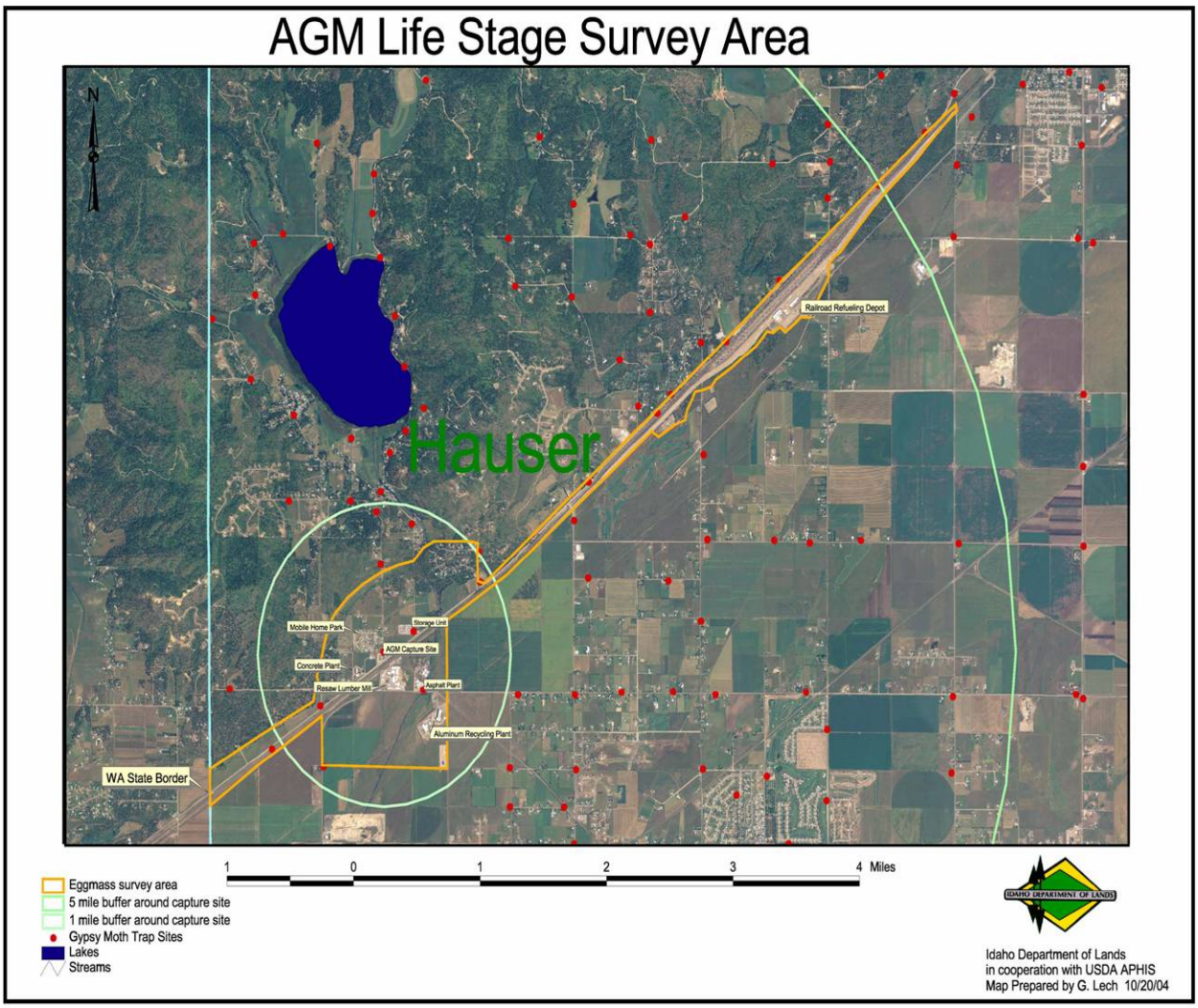

AGM Life Stage Survey Area
N
Hauser
Railroad Refueling Depot
Mobile Home Park
Storage Unit
AGM Capture Site
Concrete Plant
Resaw Lumber Mill
Asphalt Plant
Aluminum Recycling Plant
WA State Border
1 0 1 2 3 4 Miles
Eggmass survey area
5 mile buffer around capture site
1 mile buffer around capture site
Gypsy Moth Trap Sites
Lakes
Streams
IDAHO DEPARTMENT OF LANDS
Idaho Department of Lands
in cooperation with USDA APHIS
Map Prepared by G. Lech 10/20/04

Table 1 - Gypsy moth trapping history in Idaho

	NUMBER OF TRAPS SET				NUMBER OF MOTHS CAUGHT				# POS. TRAPS
YEAR	DET.[2]	DEL.[3]	MASS[4]	TOTAL	DET.[2]	DEL.[3]	MASS[4]	TOTAL	
1974[1]									
1975	45			45					
1976	254			254					
1977	232			232					
1978	248			248					
1979[1]									
1980	121			121					
1981	95			95					
1982	35			35					
1983[1]									
1984[1]									
1985[1]									
1986	208			208	1			1	1
1987	420			420	35			35	9
1988	1558	1457		3015	8	414		422	210
1989	2248		7303	9551	17		51	68	54
1990	5640	358	3268	9266	4	2		6	3
1991[5]	4641	121		4762	4			4	4
1992	4823	130		4953	2	1		3	3
1993	4314	115		4429	2			2	1
1994	4239	96		4335	1	2		3	3
1995	4522	136		4658	1			1	1
1996	4290	117		4407					
1997	5085	20		5105					
1998	4904			4904	7			7	3
1999	4837	155	90	5082					
2000	5398	36		5434					
2001	5346			5346	2			2	2
2002	5024	35		5059					
2003	5582	35		5617					
2004	5875			5875	1 *AGM*			1	1 *AGM*

[1]Trapping did occur in Idaho in these years, and no moths were found. However, records are not complete as to the exact number of traps placed.
[2]Detection.
[3]Delimitation.
[4]Mass trapping for control, at approximately 9 traps/acre.
[5]Number of traps set in 1991 revised after receipt of final data.

Table 2 - Number of gypsy moth traps placed, by agency, in Idaho in 2004.

AGENCY	DETECTION TRAPS	DELIMITING TRAPS	MASS TRAPS	TOTAL TRAPS
Idaho Dept. of Lands	**3270**	**0**	**0**	**3270**
Idaho Dept. of Agriculture	**1926**	**0**	**0**	**1926**
USFS - Region 4	**577**	**0**	**0**	**577**
USFS - Region 1	**102**	**0**	**0**	**102**
TOTALS	**5875**	**0**	**0**	**5875**

Table 3 - 2004 Trap placements by counties.

COUNTY NAME	NO.	DETECTION 4/MILE^2	DELIMITATION 16/MILE^2	MASS 9/ACRE	TOTAL TRAPS
Ada	1	432			432
Adams	2	40			40
Bannock	3	112			112
Bear Lake	4	20			20
Benewah	5	161			161
Bingham	6	50			50
Blaine	7	170			170
Boise	8	52			52
Bonner	9	1170			1170
Bonneville	10	110			110
Boundary	11	208			208
Butte	12	12			12
Camas	13	12			12
Canyon	14	247			247
Caribou	15	18			18
Cassia	16	35			35
Clark	17	6			6
Clearwater	18	227			227
Custer	19	23			23
Elmore	20	103			103
Franklin	21	12			12
Fremont	22	31			31
Gem	23	62			62
Gooding	24	90			90
Idaho	25	317			317
Jefferson	26	22			22
Jerome	27	41			41
Kootenai	28	1022			1022

COUNTY NAME	NO.	DETECTION 4/MILE^2	DELIMITATION 16/MILE^2	MASS 9/ACRE	TOTAL TRAPS
Latah	29	66			66
Lemhi	30	32			32
Lewis	31	9			9
Lincoln	32	24			24
Madison	33	25			25
Minidoka	34	30			30
Nez Perce	35	90			90
Oneida	36	8			8
Owyhee	37	66			66
Payette	38	54			54
Power	39	17			17
Shoshone	40	120			120
Teton	41	8			8
Twin Falls	42	241			241
Valley	43	227			227
Washington	44	53			53
TOTALS		5875	0	0	5875

HAANCHEN BARLEY MEALYBUG (*Trionymus haancheni* McKenzie) - A new insect pest of barley, the Haanchen barley mealybug, was discovered for the first time in Idaho in Caribou county in June of 2003 by University of Idaho Entomologist, Juan M. Alvarez.

The host was a commercial barley field near Soda Springs. Additional surveys conducted by Dr. Alvarez have detected this pest in eight eastern Idaho counties: Bannock, Bingham, Bonneville, Fremont, Jefferson Madison, Power, and Teton. **There were no new county records of this pest for Idaho in 2004**. Overall pest infestations and economic damage was less severe this season than in the last. This pest caused sporadic damage in barley fields near Ashton, Soda Springs, and Bancroft. University of Idaho Current Information Series 1109 provides information on this emerging pest.

JAPANESE BEETLE (*Popillia japonica* Newman) – During the 2004 field season, 203 traps were placed at 94 sites in 44 counties and visual inspections of nursery premises were performed. **All traps and visual inspections were found negative.** Japanese beetle quarantines are maintained and vigorously enforced by California, Idaho, Oregon, Utah and Washington. This beetle and its larval form are known to infest over 400 horticultural and ornamental plants, including sod. Establishment of the beetle in Idaho could seriously affect exports to the above-listed states and British Columbia. The beetle is known to infest most states east of the Mississippi River. Eastern Idaho is at increased risk for a possible Japanese beetle infestation, due to the amount of nursery stock from infested eastern states being allowed into the Jackson, Wyoming area.

***KARNAL BUNT (*Tilletia indica*) –** ISDA collected 65 samples from 21 counties in Idaho for the 2004 Karnal Bunt Survey. All of the samples were collected and analyzed according to the 2004 National Karnal Bunt Monitoring Plan. **All samples processed were found free of *Tilletia indica*.** Below is a table listing sample numbers by county in the 2004 survey.

COUNTY	Number of KB Samples	COUNTY	Number of KB Samples
BANNOCK	2	JEFFERSON	3
BEAR LAKE	1	KOOTENAI	1
BINGHAM	13	LEMHI	1
BLAINE	1	LEWIS	5
BOUNDARY	1	MADISON	3
CANYON	4	NEZ PERCE	7
CASSIA	8	OWYHEE	1
CLEARWATER	1	POWER	7
ELMORE	1	TETON	2
FREMONT	2	WASHINGTON	1
GOODING	2		

MEXICAN BEAN BEETLE (*Epilachna varivestis* Mulsant)

As part of the export certification field inspection program of bean seed, ISDA staff conducted surveys for the presence of Mexican Bean Beetle (MBB). The last recorded infestation of MBB in Idaho occurred in the Boise area in 1993. Eradication efforts included the application of insecticide and the release of biological control agents. The infestation was successfully eradicated in 1994. No infestations have been recorded since then. The southwest Idaho bean production area was targeted for a follow-up detection survey. Seasonal inspectors were specially trained and extra effort was made to check fields for any exotic bean insects. **No MBB infestations were detected during the 2004 field season.**

Counties Surveyed	Number of Bean Fields Inspected	Number of Acres Inspected
Ada	38	511
Canyon	558	7717
Gem	8	66
Owyhee	18	441
Payette	9	245
Washington	6	178
Idaho Total	637	9158

***SUDDEN OAK DEATH (*Phytophthora ramorum*)**

A Sudden Oak Death (SOD) survey was conducted in cooperation with USDA, APHIS in 2004. ISDA staff visited 30 nurseries across the state. The 14 counties represented in this survey were Ada, Bonner, Bonneville, Canyon, Idaho, Kootenai, Latah, Madison, Minidoka, Nez Perce, Payette, Pocatello, Twin Falls, & Valley.

A total of 362 individual plants were tested for the survey. Samples were initially tested using an ELISA to

detect the presence of *Phytophthora* or related genera. Of the 364 plants screened, 23 tested positive for *Phytophthora*. Tissue from these 23 plants was cultured to further identify the *Phytophthora* to the species level. All 23 were negative for *Phytophthora ramorum*, but yielded other *Phytophthora* (or related) species. The remaining tissue from the 23 ELISA positive plants were sent for PCR testing to the USDA Laboratory in Beltsville Maryland, to confirm the negative status. **All of the PCR results were negative for *P. ramorum*.**

In addition, another 29 samples were submitted by individuals or plant industry inspectors for SOD testing, apart from the national survey. **All of these were negative.** Seventy-two plants were sampled for SOD testing as the result of trace-forwards from potentially infected shipments. **These samples have all been negative as well.**

REGULATORY AND OTHER PEST DETECTION INCIDENTS:

Ralstonia

Ralstonia solanacearum is a plant pathogenic bacterium that causes wilt diseases. Various races of this organism affect different crops around the world including tomato, potato, eggplant, banana and tobacco. Of particular concern to the US is *Ralstonia solanacearum* race 3 biovar 2 because of its affect on eggplant, geraniums, potatoes and tomatoes. While race 1 is endemic to the Southeastern US where it can affect tomato crops, *Ralstonia solanacearum* race 3 biovar 2 is not known to occur in the US and is considered to be of quarantine importance. Possible Ralstonia infected geranium plants imported from Guatemala and some Idaho greenhouses were under investigation during 2003 for possible spread into the U.S. The investigation carried forward during the winter of 2004 in Idaho. In Southwest Idaho, only 1 greenhouse received suspect material. A Stop Sale order was issued on pots of American zonal geraniums (Coral variety) at a greenhouse in the city of Star. One sample from a non-suspect, adjacent variety was tested at the ISDA Plant Pathology Lab for *Ralstonia*, and was found negative. The material was released to USDA-APHIS/PPQ for destruction.

In Eastern Idaho, a Stop-Sale order was issued on 97 'Cherry Rose #2' variety geraniums at Pinehurst Nursery in Pocatello on January 12, 2004. Samples were taken from 2 plants on 1/15/04, with negative results for *Ralstonia*. The material was released on January 21, 2004 to USDA-APHIS/PPQ for destruction. Two other nurseries in eastern Idaho received 2003 suspect plants. No symptoms were observed on any suspect material and no Stop-Sales were issued at either facility. USDA-APHIS/PPQ, supervised the destruction of plants from those sites according to the USDA's Emergency Action Notification dated January 15, 2004.**The investigation by the cooperating agencies, ISDA and Boise office of USDA/APHIS/PPQ was completed in 2004 with no geranium plants found positive for *Ralstonia* in Idaho.**

Exotic Scarab Beetle (*Ancognatha ustulata* Burmeister)

An ISDA Plant Industries' investigator received a dead beetle specimen in August 2004 from a gift and floral shop in Burley, ID. The specimen was reported contaminating a shipment of carnations of undetermined origin. The specimen was forwarded to Dr. Jim LeBonte, Oregon Department of Agriculture, for identification. The beetle was identified as a scarab beetle of the genus *Ancognatha,* probably *ustulata* Burmeister species. This species is native to Central and South America and not known to occur in North America. A sibling species *Ancongatha scarabaeoides* Erichson has been reported as a pest of potatoes, oats, onions, corn, wheat, and barley in Columbia. It is not known if this species could survive outside of the semitropical areas of North America. No other specimens were recovered from the site.

Snail Identification Lewiston Idaho Nursery

A Plant Industries investigator conducting a nursery inspection collected a small snail specimen in a pot containing Bloodstone, *Armeria maritama* in Lewiston, ID May 6 2004. The specimen was sent to the PPQ state survey coordinator, Mark Hitchcox, Portland, OR, and subsequently forwarded to PPQ identifier, Patrick Marquez in Seattle, WA. The specimen was identified as family *Succineidae,* genus *Succinea,* species *oregonensis* or *campestis.* No regulatory action was required.

DISEASES AND PESTS FOUND DURING 2004 FIELD INSPECTIONS FOR EXPORT CERTIFICATION

Weather conditions for the 2004 growing season were wetter in May and June than last year. However, the summer months were somewhat cooler. This may have again contributed to fewer diseases being observed during active growth field inspections. Limited supplies of irrigation water late in the growing season may also have contributed to drier-than-normal field conditions resulting in less disease expression in the field.

Forty-four seed companies submitted a total of 46,282 acres for inspection in 2004 compared to 41 firms enrolling 43,433 acres in 2003 (a 6.5 percent increase). The number of acres actually inspected, due to multiple inspections required for some crop diseases, was 79,671 acres in 2004 versus 71,357 acres in 2003 versus 60,692 acres in 2002. There were 3,355 fields representing 27 different crops in the Field Inspection for Export Certification program.

Year	# Participating Firms	# of Crops	# Fields	Submitted Acres	Inspected Acres
2002	46	25	2,538	36,859	60,692
2003	41	27	3,016	43,433	71,357
2004	44	27	3,355	46,282	79,671

Alfalfa seed: A total of 2132.90 acres were submitted for inspection. Canadian Thistle (*Cirsium arvense*) was observed in 279 acres. Dodder (Cuscuta spp.) was observed in 30.90 acres. No *Fusarium oxysporum f sp medicaginis, Phoma medicaginis,* Alfalfa mosaic virus, *Verticillium albo-atrum*, *Clavibacter michiganensis pv*. *insidiosus*, *Xanthomonas campestris pv. alfalfae, Ditylenchus dipsaci, Hieracium pilosella, Orobanche spp*.,or *Striga spp*. were found.

Barley: A total of 2 acres of Barley were inspected in 2004. No *Tilletia controversa* or Barley stripe mosaic virus was detected.

Beans, Dry: A total of 2717.61 acres were submitted for inspection. Bean common mosaic virus, Bean southern mosaic virus, and Bean yellow mosaic virus were not observed in any of the fields. To meet requirements for the Rules Governing The Planting Of Bean Seed (*Phaseolus)* Species In Idaho, IDAPA 02.06.06, all fields submitted were also inspected for Halo blight, Common blight, Fuscus blight, Brown spot, Bacterial wilt, or Anthracnose, with none being observed.

Beans, Garden: A total of 17,570.25 acres were submitted for inspection. Bean common mosaic virus was not detected. Bean southern mosaic virus, Pea seed-borne mosaic virus, and Pea enation mosaic virus were not observed in any of the fields. Additionally, Halo blight, Common blight, Fuscus blight, Brown spot, Bacterial wilt, or Anthracnose were not observed in any fields submitted. Numerous fields were also inspected for *Elsinoe phaseoli, Isariopsis griseola*, Tobacco ring spot virus and Tomato ring spot virus, with none of these diseases being detected.

Brassica spp. (Kale, Mustard, Rutabaga, and Turnip): Four fields totaling 42 acres were inspected and found apparently free from *Alternaria brassicae, A. brassicola, Plasmodiophora brassica, Pseudomonas syringae pv. maculicola, Sclerotinia sclerotiorum*, and *Xanthomonas campestris pv. campestris*.

Cantaloupe, Cucumber, Pumpkin, Squash and Watermelon: Twenty-five small fields totaling 12.68 acres were submitted and inspected for Cucumber mosaic virus, Squash mosaic virus, *Xanthomonas cucurbitae, Pseudomonas syringae pv. lachrymans, Colletotrichum orbiculare*, and *Acidovorax avenae supsp. citrulli*. None of the diseases listed were detected.

Carrot: A total of 399.38 acres (78 fields) were inspected for *Alternaria dauci, A. radicina, Pectobacterium carotovorum* pv. *carot*, and *Xanthomonas campestris pv. carotae*. No diseases of quarantine significance were observed.

Corn: None of the Downy mildew diseases, Maize dwarf mosaic virus, Maize chlorotic mottle virus, Southern corn leaf blight, was detected in any of the 10,171.71 acres submitted for inspection. Only one field, 2.85 acres, was confirmed positive for High plains virus, and another 61.95 acres had Wheat streak mosaic virus. Common smut, *Ustilago zeae*, was observed in numerous fields as has been the case in prior seasons. Twelve fields were inspected, sampled and tested according to the requirements for export of sweet corn seed

to Australia. Nine fields tested positive for Wheat streak mosaic virus. One field tested positive for High plains virus. Both of these diseases exclude fields from the Australia export program.

Garlic: Two fields totaling 1.5 acres were inspected and found free from any disease symptoms of quarantine significance, including *Sclerotium cepivorum* (Onion white rot).

Lettuce: Sixty fields totaling 401 acres were inspected and found apparently free from Lettuce mosaic virus. No pests of quarantine concern were found in any fields.

Mint: Eighteen fields totaling 269.66 acres were inspected and found apparently free from *Verticillium dahliae,* Mint root borer (*Fumibotys fumalis*), and *Pseudomonas nigrina*.

Onion and Chive: Sixty-four fields totaling 300.55 acres were inspected. All fields inspected were found apparently free from *Ditylenchus dipsaci, Alternaria porri, Urocystis colchici, Colletotrichum circinans*, Onion yellow dwarf virus, and *Botrytis aclada*. No Onion white rot *(Sclerotium cepivorum)* was observed in any of the fields submitted for inspection.

Peas: A total of 6,145.15 acres (416 fields) were inspected during active growth. No *Ascochyta pisi*, Pea early browning virus, Pea enation mosaic virus, Pea seedborne mosaic virus, or *Xanthomonas axonopodis* pv. *phaseoli* were observed in any of the fields. *Pseudomonas syringae* pv. *pisi*, was found infecting only 35 acres.

Pepper: Three plots totaling 3.25 acres were inspected and found free from observable diseases of quarantine significance including *Colletotrichum dematium, Corynebacterium michiganensis pv. michiganensis*, Cucumber mosaic virus, *Phytophthora capsici, Ralstonia solanacearum, Pseudomonas syringae pv. Lachrymans, P. syringae pv. tomato, Xanthomonas vesicatoria*, and Tobacco etch virus.

Potato: Two fields (231 acres) were inspected and found apparently free from *Phytophthora infestans.*

Radish: Twenty-three fields (328 acres) were inspected and found apparently free from *Colletotrichum higginsianum, Xanthomonas campestris pv. campestris*, and *X. campestris pv. raphani*.

NUMBER OF FIELDS AND ACREAGE SUBMITTED FOR INSPECTION UNDER THE IDAHO RULES FOR PHYTOSANITARY AND POST-ENTRY CERTIFICATION AND RULES GOVERNING THE PLANTING OF BEANS *(Phaseolus)* SPECIES IN IDAHO FOR THE 2004 FIELD SEASON

SPECIES	Number of Fields	SUBMITTED ACRES	INSPECTED ACRES
Alfalfa	68	2122.9	2122.50
Barley	1	2.00	2.00
Beans, Dry	258	2717.61	6035.92
Beans, Garden	1140	17570.25	39287.30
Cantaloupe	19	10.18	10.18
Carrot	78	399.38	397.38
Chive	1	2.00	2.00
Coriander	1	5.00	5.00
Corn	1026	10172.71	19090.89
Corn, Area	34	797.00	0.00
Cucumber	1	0.25	0.25
Garlic	4	3.83	1.50
Grain Sorghum	4	4.53	4.53
Kale	1	13.00	13.00
Leek	3	17.50	17.50
Lettuce	60	401.00	401.00
Mint	18	134.83	269.66
Mustard	1	6.00	6.00
Onion	63	298.56	298.55

SPECIES	Number of Fields	SUBMITTED ACRES	INSPECTED ACRES
Peas	416	6145.15	11117.88
Peas, Area	123	4870.50	0.00
Pepper, Bell	1	1.25	1.25
Pepper, Hot	2	2.00	2.00
Potato	2	231.00	231.00
Pumpkin	2	1.25	1.25
Radish	23	328.00	328.00
Rutabaga	1	8.00	8.00
Squash	1	0.50	0.50
Turnip	1	15.00	15.00
Watermelon	2	0.50	0.50
TOTALS	3355	46281.68	79670.54

Eoin Davis, Program Manager, Plant Industries, Boise, (208) 332-8620 and Garry West, Program Manager, Plant Industries, Twin Falls, (208) 736-2195, compiled the field disease report.

SUMMARY OF PLANT PATHOLOGY LAB SAMPLES FOR 2004

In 2004, the plant pathology lab received a total of 1,491 samples, and ran 3,557 tests. Our average turnaround time in days per sample (TO) was 38 days. Of these samples, 201 were beans for serology tests, 159 were seed samples submitted for export concerns, 11 were potato samples for 'year out' certification, and 572 were field samples. Full results are listed in the table below. The lab also participated in two national surveys; Karnal Bunt (KB), and Sudden Oak Death (SOD). The KB survey comprised 66 samples from 21 counties. All samples were negative for KB. The SOD survey comprised 463 samples. Of these, 72 samples came from nurseries that received stock from infested facilities in OR and CA (trace-forwards). Twenty-nine samples were submitted from homeowners, and plant industry inspectors from nursery inspections not part of the official survey (submitted). Three hundred sixty-two samples were taken from 30 different nurseries for the SOD national survey (survey). No samples were found positive for SOD in Idaho. In 2004, there was an increase in sample numbers from last year, and unfortunately, there was an increase in turnaround time. No significant bean diseases were detected this year, but an increase in detection of Wheat Streak Mosaic Potyvirus in corn was observed.

	CROP	NUMBER OF SAMPLES	NUMBER OF TESTS	POSITIVES (Organism)	TO
Bean	Seed	201	1149		39
	Field	19	24		22
Misc. Seed					19
	Alfalfa	40	55	2 (*Clavibacter michiganense insidiosum*)	
	Barley	15	18		
	Broccoli	1	2		
	Cabbage	1	2		
	Corn	1	1		

	CROP	NUMBER OF SAMPLES	NUMBER OF TESTS	POSITIVES (Organism)	TO
	Grass pea	1	1		
	Onion	3	3		
	Pea	10	10	1 (*Pseudomonas syringae pisi)*	
	Radish	10	20		
	Soil	60	60		
	Spinach	1	1	1 (*Verticillium dahliae*)	
	Tall fescue	3	3	3 (*Neotyphodium coenophialum*)	
	Tomato	1	1		
	Wheat	11	18		
	Wheat straw	1	2		
Potato	Seed	11	33		
SOD Survey					
	Traceforward	72	72		
	Submitted	29	29		
	Survey	362	362		
KB Survey		66	66		83
Misc Field					26
	Alfalfa	4	7		
	Bedding plants	1	2		
	Carrot	2	2		
	Coriander	1	2		
	Corn	526	1555	1 (High Plains Virus) 9 (Wheat Streak Mosaic Virus)	
	Dogwood	2	3	1 (**Septoria)*	
	Geranium	1	2		
	Gerbera	1	2		
	Hackberry	1	2		
	Kalanchoe	1	2		
	Lettuce	1	1		
	Lonicera	1	2		
	Maple	1	2		
	Mint	3	3		
	Onion	3	6		
	Pea	19	24	1 (*Pseudomonas syringae pisi)*	
	Peonie	1	3		
	Teff	1	1		

	CROP	NUMBER OF SAMPLES	NUMBER OF TESTS	POSITIVES (Organism)	TO
	Tomato	1	2		
	Viburnum	1	2		
TOTAL		**1491**	**3557**		

The Plant Pathology Laboratory Report was compiled by Ms. Liz Vavricka, Principal Microbiologist, Boise, ID Phone (208) 332-8640.

EXPORT CERTIFICATION FOR THE 2004 CALENDAR YEAR

The ISDA issued 3,610 Federal and 1,063 State Phytosanitary Certificates for 71 different types of commodities to 84 countries. The Plant Industries Division certified 228,376,466 pounds of seed and other commodities for export. The Idaho State Department of Agriculture operates this program under a Memorandum of Understanding with the U.S. Department of Agriculture.

NURSERY INSPECTIONS FOR COMPLIANCE WITH THE IDAHO NURSERY LAW TITLE 22, CHAPTER 23 IDAHO CODE

In 2004, there were 1,556 licensed nurseries, and of those, 895 were inspected for compliance with the Idaho Nursery and Florists Law and for the presence of plant pests and noxious weeds. In addition, specific checks were made for compliance with various state laws, quarantines and pests of particular concern. The results are listed below:

Quarantine/Pests	NO. OF INSPECTIONS	Incidents	Corrective Action	Stop Sales
Certified Seed Potatoes	121	2	1	1
Onion White Rot	144	4		3
European Corn Borer	150			
Japanese Beetle	378			
Mint Quarantine	93			
Crop Management Zone	34			
Grape Quarantine	77			
Peach Tree Quarantine	32			
Sudden Oak Death	339			
Pine Shoot Beetle	246			
Gypsy Moth	338			
Red Imported Fire Ants	249			
Noxious Weeds	607	32	10	
Idaho Seed Law	240	4	2	1
Nematodes	11			
Aphids	779	28	12	1
Late Blight	247			

Quarantine/Pests	NO. OF INSPECTIONS	Incidents	Corrective Action	Stop Sales
Hops	10			
Retail Potatoes	139	16	2	
General Pests	152	55	19	2
Day Lily Rust	0			
Total Inspections	**4,386**	**141**	**46**	**7**

WHEAT SEED GALL NEMATODE *Anguina tritici* - There were 64 samples processed from 20 counties analyzed for the presence of this exotic nematode by Dr. Saad Hafez, Nematologist, University of Idaho. All of the samples were sub sampled and 200 grams of seed were placed in a mist chamber using a Baermann funnel extraction technique. **All samples were negative for Wheat seed gall nematode.** Below is a table listing sample numbers by county in the 2004 survey.

COUNTY	Number of WSGN Samples	COUNTY	Number of WSGN Samples
BEAR LAKE	1	JEFFERSON	3
BINGHAM	13	KOOTENAI	1
BLAINE	1	LEMHI	1
BOUNDARY	1	LEWIS	5
CANYON	4	MADISON	3
CASSIA	8	NEZ PERCE	7
CLEARWATER	1	OWYHEE	1
ELMORE	1	POWER	6
FREMONT	2	TETON	2
GOODING	2	WASHINGTON	1

SW IDAHO BLACK FLY OUTBREAK

During the spring and summer of 2004, southwest Idaho was hit by a black fly outbreak of historic proportions. The first hatch of significant adult populations occurred in April and there were three to four subsequent generations of the pest. By August, most adult populations dropped off to densities that were not considered to be a nuisance. The dominant species was *Simulium vittatum,* unofficially called the striped black fly. To a much lesser extent, *Simulium bivittatum*, may have also added to the general black fly problem. The black fly outbreak was most severe in Canyon, Gem, Payette, Owyhee, and Washington counties of southwest Idaho as well as Malheur County across the border in eastern Oregon. The black fly crisis involved multiple impacts with losses to livestock husbandry including beef, sheep, dairy and horses. The general quality of life was severely impacted because of the black fly being a human nuisance. There were several reports of *S. vittatum* biting humans. There is no evidence that these species vectored any animal or human pathogens. The USDA FSA Canyon County office published a rough estimate of losses to the animal industry in that area approaching $1.5 million. There is a huge watershed in the lower Snake River valley that provides for many breeding sites for black flies. This watershed includes the main stem of the Snake River and its key tributaries, including the

Boise, Malheur, Owyhee, Payette, and Weiser Rivers. In addition, during the irrigation season, hundreds of mile of irrigation and drainage canals have running water during the months of May through October and serve as secondary habitats for summer generations of the pest. There is currently no abatement program or districts established in SW Idaho to reduce black fly populations. ISDA, Division of Plant Industries, in cooperation with the University of Idaho and Oregon State University Extension Services, organized a "Black Fly Information Meeting" for the public held August 10, 2004 in Fruitland, Idaho. Over 50 citizens attended. Several county commissioners and state legislators attended. As a follow-up, representatives of the ISDA met with county commissioners in all of the impacted counties to discuss the role of the various agencies, including ISDA, in black fly management and strategies for future action against the pest if black fly outbreaks occur in 2005. OSU and U of I faculty have submitted grant proposals to conduct surveys and research black fly management. Currently, ISDA has no statutory mandate or funding support to conduct area-wide surveys or control programs.

PUBLIC OUTREACH AND EDUCATIONAL PROGRAMS FOR EXOTIC PESTS

Soybean Rust *Phakopsora pachyrhizi*

Targeted mailing of soybean rust pest alert fact sheet were sent to:

- Idaho Bean Companies
- Idaho Bean Commission member list
- University of Idaho, Extension Offices in major bean producing counties

Emerald Ash Borer *Agrilus planipennis* and Asian Longhorned Beetle *Anoplophora glabripennis*

Targeted mailing of fact sheets were sent to:

- Idaho Certified Arborists
- Licensed Pesticide Applicators Urban Pesticide Categories
- University of Idaho, County Extension Offices

Giant African Land Snails *Achatina fulica*

Targeted mailing of fact sheets were sent to:

- Idaho Public Schools
- Idaho District Health Offices
- Idaho Pet Stores

ISDA AND USDA COOPERATIVE RANGELAND GRASSHOPPER AND MORMON CRICKET SUPPRESSION PROGRAM

Summary of Grasshopper Survey Results

With a few exceptions, most areas of Idaho did not experience heavy grasshopper infestations in 2004. Infestations were detected in Washington, Gem, Payette, Canyon and Ada counties in Southwest Idaho; Gooding, and Cassia counties in South Central Idaho; and Bear Lake County in Southeast Idaho. Surveys in Northern Idaho found infestations in Clearwater, Nez Perce and Idaho counties.

The populations in Southwest Idaho are troubling because the history of major grasshopper outbreaks indicates that they begin in this area and spread eastward over the course of a few seasons. Additionally, several of the currently infested areas comprise areas of critical environmental concern managed by BLM and were excluded from treatments in 2004. These areas will be closely monitored in 2005.

Species composition consisted primarily of *Aulocara ellioti, Oedaleontus enigma, Camnula pellucida, and Melanoplus sanguinipes. Melanoplus bivittatus* and *M. packardii* were abundant in localized areas. The season should have allowed exceptional oviposition opportunities and there are currently no factors that would indicate any reason to expect major decreases in overall grasshopper populations in 2005.

SIGNIFICANT 2004 RANGELAND GRASSHOPPER SURVEY RESULTS

County acres infested at more than 8 grasshoppers per sq. yd

COUNTY	BLM	NATIONAL FOREST	STATE LAND	PRIVATE LAND	TOTAL
Ada	9,000		1,000	10,000	20,000
Adams				1,000	1,000
Bear Lake				4,000	4,000
Blaine	1,000			2,500	3,500
Boise		1,000		1,000	2,000
Canyon	1,000			1,000	2,000
Cassia	5,000			2,000	7,000
Clearwater				1,000	1,000
Elmore	5,000	1,000	1,000	7,500	14,500
Gem	10,000		1,000	109,000	120,000
Gooding	1,000		600		1,600
Idaho		1,000		1,000	2,000
Lincoln	4,000			1,000	5,000
Minidoka	2,000			1,000	3,000
Nez Perce				1,000	1,000
Owyhee	15,000		1,000	1,000	17,000
Payette	25,000		2,000	48,000	75,000
Valley				1,000	1,000
Washington	25,000	5,000	2,000	68,000	100,000
TOTAL	**103,000**	**8,000**	**8,600**	**261,000**	**380,600**

Summary of Mormon Cricket Survey Results

In Western Idaho, the Mormon cricket outbreak that has been building in Owyhee County increased drastically in density and extent in 2004. We anticipate this large infestation has not yet reached its peak, although treatments may have reduced local elements of the outbreak. The infestation extends eastward about 40 miles from the Oregon border and southward about 70 miles from the Snake River.

There are also infestations of Mormon crickets in Gooding, Camas, Elmore, Ada, Boise, Gem, Payette, and Washington counties. Control activities in Elmore County during 2003 seem to have diminished populations in some areas, but the overall outbreak stretches over 125 miles from north of Gooding to the Snake River west of Cambridge, and the populations are increasing in the western part of the outbreak.

In Eastern Idaho, other infestations are building in Oneida, Power and Bannock counties. These infestations extends over 25 miles from the Utah state line to areas around McCammon and Rockland.

SIGNIFICANT 2004 MORMON CRICKET SURVEY RESULTS

County acres infested at more than 3 Mormon crickets per sq. yd.

	BLM	NATIONAL FOREST	STATE LAND	PRIVATE LAND	TOTAL
Ada	10,000	1,000	9,000	55,000	75,000
Bannock	1,000	1,000	300	1,000	3,300
Boise	1,000	50,000	25,000	24,000	100,000
Camas	2,500		1,500	2,000	6,000
Elmore	150,000	25,000	25,000	100,000	300,000
Gem	8,000		2,000	10,000	20,000
Gooding	25,000		2,500	2,500	30,000
Oneida	2,000	640	640	3,000	6,280
Owyhee	1,450,000		100,000	100,000	1,650,000
Payette	1,000		1,000	1,000	3,000
Power	1,000	1,000	640	2,000	4,640
Valley		2,000			2,000
Washington	35,000	60,000	25,000	80,000	200,000
TOTAL	**1,686,500**	**140,640**	**192,580**	**380,500**	**2,400,220**

Summary of Complaints and Treatments

Many members of the public, especially in Owyhee County and along the Boise and Danskin Fronts in Ada, Elmore, and Boise counties, voiced general complaints about Mormon crickets throughout the spring and summer.

There were also scattered complaints about grasshoppers and Mormon crickets from southeastern Idaho.

FEDERALLY MANAGED LANDS

U.S. Department of Agriculture, Animal and Plant Health Inspection Service (APHIS), Plant Protection and Quarantine (PPQ) received a total of 93 official complaints about grasshoppers and Mormon crickets. PPQ conducted ten treatment projects on federal land in response to these complaints (some individual projects were in response to more than one complaint). All of these treatments were on rangeland managed by Bureau of Land Management or National Forest Lands and consisted of applications of 10 lbs/acre of 5% carbaryl bait. The bait was distributed by ground along roads and trails throughout infested rangelands in Ada, Boise, Elmore, Owyhee, Cassia, Oneida, Power and Bannock counties and by air on infested rangelands in Elmore, Washington, Owyhee, and Gooding counties. In no cases were strips of more than 100 feet wide treated without intervening untreated spaces. The distance between swath centers of aerially applied bait ranged from 133 feet for grasshoppers to 500 feet for Mormon crickets. PPQ treated a total of 21,465 acres with 214,650 lbs of carbaryl 5% bait in Idaho in 2004.

Acres of Federally Managed Land Treated for
Grasshoppers or Mormon Crickets in Idaho in 2004

Owyhee	13,525
Elmore	2,815
Gooding	2,520
Washington	2,190
Bannock and Power	175
Ada	175
Cassia	30
Boise	20
Oneida	15
Total	21,465

The other official complaints did not result in treatment by PPQ because:

Insects were on private land and not on federal land, or
Environmental concerns precluded treatments, or
Numbers of insects present did not justify treatment.

Grasshopper populations on federally managed lands were generally light with only a few outbreaks. In areas where treatments were applied, the bait was effective in reducing the populations after a few days up to several weeks.

The Mormon cricket outbreak in Owyhee County necessitated a drawn-out treatment campaign, utilizing aircraft and ground equipment, to disperse 135,250 lbs of bait on BLM-managed lands. In addition, unknown parties distributed additional bait along roads and trails in areas where Mormon cricket numbers may not have been diminished by PPQ's treatments. In areas where bait could be applied by air or ground, the Mormon cricket populations were suppressed to levels that did not result in extensive crop loss or damage to natural resources.

STATE AND PRIVATE LAND

Idaho State Department of Agriculture (ISDA) participated in cost-share treatment projects with private land managers and county agricultural agents to treat range and croplands in southern Idaho. These projects included:

2004 – ISDA AERIAL APPLICATION COST SHARE PROJECTS FOR PRIVATE RANGELAND GH SUPPRESSION

Location	Number of landowners	Total Protected Acres*	Cost to ISDA**	Cost to Private Landowner	Total Project Costs
Horseshoe Bend Boise and Ada counties	5 private & state lands	10,212	$ 19,231	$7,845	$27,076
Tree Top Ranch Elmore County	1 private	1,600	$8,566	$4,296	$12,862
Camas Prairie Camas County	5 private landowners & state lands	15,585	$25,949	$13,017	$38,966
Cassia County	1 private landowner	1,415	$4,717	$2,358	$7,075
Bear Lake County	14 private landowners	5,592	$13,500	$6,771	$20,271
Elmore/Gooding Counties Federal and State lands cooperative project	Idaho Department of Lands	640	$2,640		$2,640
Total ISDA Cost Share Acres		**18,593**	**$ 74,603**	**$34,287**	**$108,890**

*A RAATS system was employed on most projects reducing total acres actual treated with insecticide.
**The ISDA cost share program for 2004 paid 2/3 of the total treatment cost. The private landowners were responsible for the remaining 1/3.

Some treatments included utilization of diflubenzuron on grain and hay crops under a special emergency exemption registration requested by impacted commodity organizations. ISDA forwarded the emergency exemption request to the Environmental Protection Agency (EPA) who approved the special label for the 2004 season.

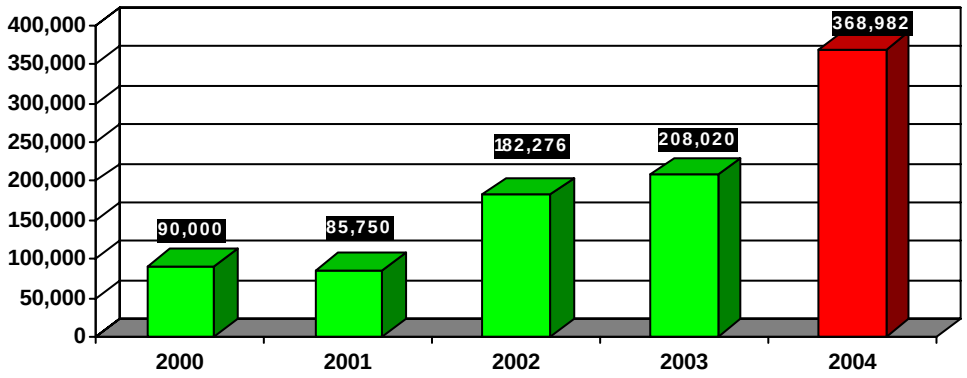
ISDA provided 5% carbaryl bait to agricultural landowners for application to their own land. A total of 400 Idaho landowners received bait for Mormon cricket suppression to protect private rangeland and cropland. The total value of the bait provided to Idaho landowners in 2004 was $203,054.

2004 - ISDA BAIT DISTRIBUTIONS FOR PRIVATE RANGELAND MC SUPPRESSION

Rank	County	Carbaryl Bait Distributed (lbs)	Number of Distributions
1	Owyhee	157,826	187
2	Elmore	78,736	93
3	Oneida	35,900	63

Rank	County	Carbaryl Bait Distributed (lbs)	Number of Distributions
4	Power	27,590	38
5	Ada	23,430	76
6	Bannock	13,100	17
7	Bear Lake	7,750	23
8	Blaine	7,450	9
9	Boise	5,082	18
10	Cassia	4,150	7
11	Washington	3,182	23
12	Others	4,786	27
Idaho	**Total**	**368,982**	**581**

ISDA GH PROGRAM
POUNDS OF CARBARYL BAIT DISTRIBUTED TO PRIVATE LANDOWNERS 2000 -2004



ISDA GRASSHOPPER/MORMON CRICKET PROGRAM - MAJOR COOPERATORS

During the 2004 season, the following cooperators provided significant help in bait distributions and overall program delivery:

- University of Idaho, Extension Service
- Seminis Seed Company, Nampa, ID
- Soranco Bean Products, Twin Falls, ID
- Owyhee County Sheriff's Department, Murphy, ID
- Ada County Weed and Pest Control District, Meridian, ID
- Boise County Road Department, Gardena, ID
- Washington County Weed Control District, Weiser, ID
- Cambridge Lumber, Inc., Cambridge, ID
- Farmers Warehouse, Mountain Home, ID

Summary of Environmental Decisionmaking
The Environmental Impact Statement regarding Rangeland Grasshopper Suppression in seventeen western states is available at: http://www.aphis.usda.gov/ppd/es/gh.html.

PPQ conducted a scoping survey in November and December of 2003 and received approximately 80

responses from private citizens, organizations, and governmental units. The responses expressed concern about the damage that grasshoppers and Mormon crickets would cause if they were not controlled and concern about potential adverse effects of insecticides. PPQ considered all of the comments and conducted four environmental assessments, one for Mormon crickets and three for grasshoppers. The Environmental Assessments regarding decisions made about the 2004 program in Idaho are available at: http://www.idahoag.us.

In an attempt to appease the parties who expressed extreme concerns about the use of liquid sprays for control of grasshoppers and Mormon crickets on rangeland, PPQ analyzed only carbaryl bait for the Mormon cricket program. In normal outbreaks, carbaryl bait can be very effective in suppressing Mormon crickets. Because Mormon crickets are flightless, travel significant distances on the ground from the places where they hatch to the places where they may damage crops or other resources, and move in large bands that can be easily detected by the general public as well as trained scouts; they can be intercepted with bait treatments applied by air or ground.

Because grasshoppers can fly, may hatch in very close proximity to crops, and are not readily detected by many members of the public until they have reached maturity; PPQ analyzed malathion and diflubenzuron sprays as well as carbaryl bait for the grasshopper programs. When the grasshopper environmental assessments were published for public comment, three organizations filed notice of intent to sue for alleged violation of the Clean Water Act. In order to avoid a delay or total shut down of the program and the public expense of legal fees (including those of the plaintiffs), PPQ made a decision to utilize only carbaryl bait in the grasshopper suppression program as well.

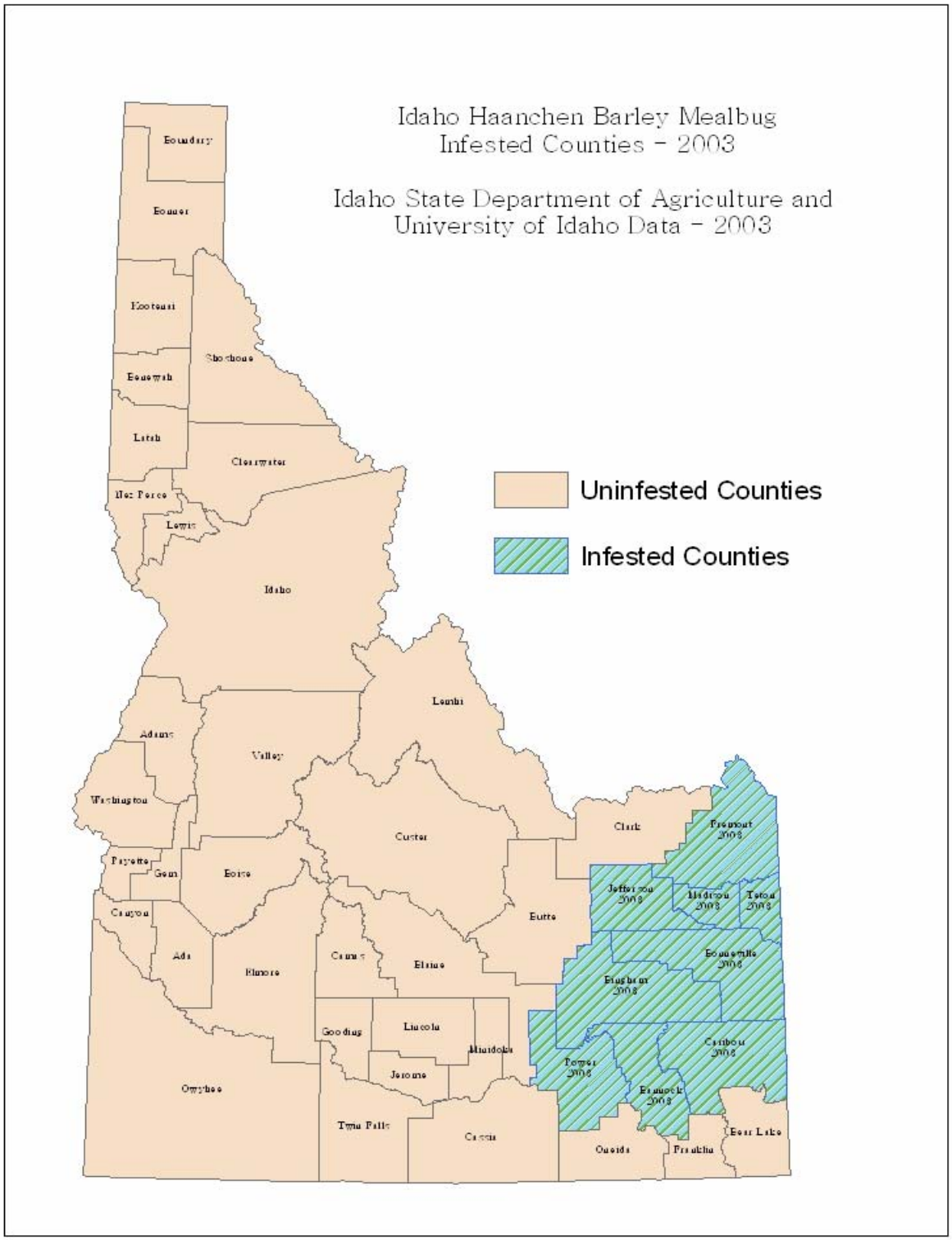
In addition, in response to stakeholders, PPQ initiated a program that allows concerned parties to request federally managed rangeland near their homes to be excluded from treatments for grasshoppers or Mormon crickets. This program was publicized through paid ads and press releases. There were no applicants for this program.

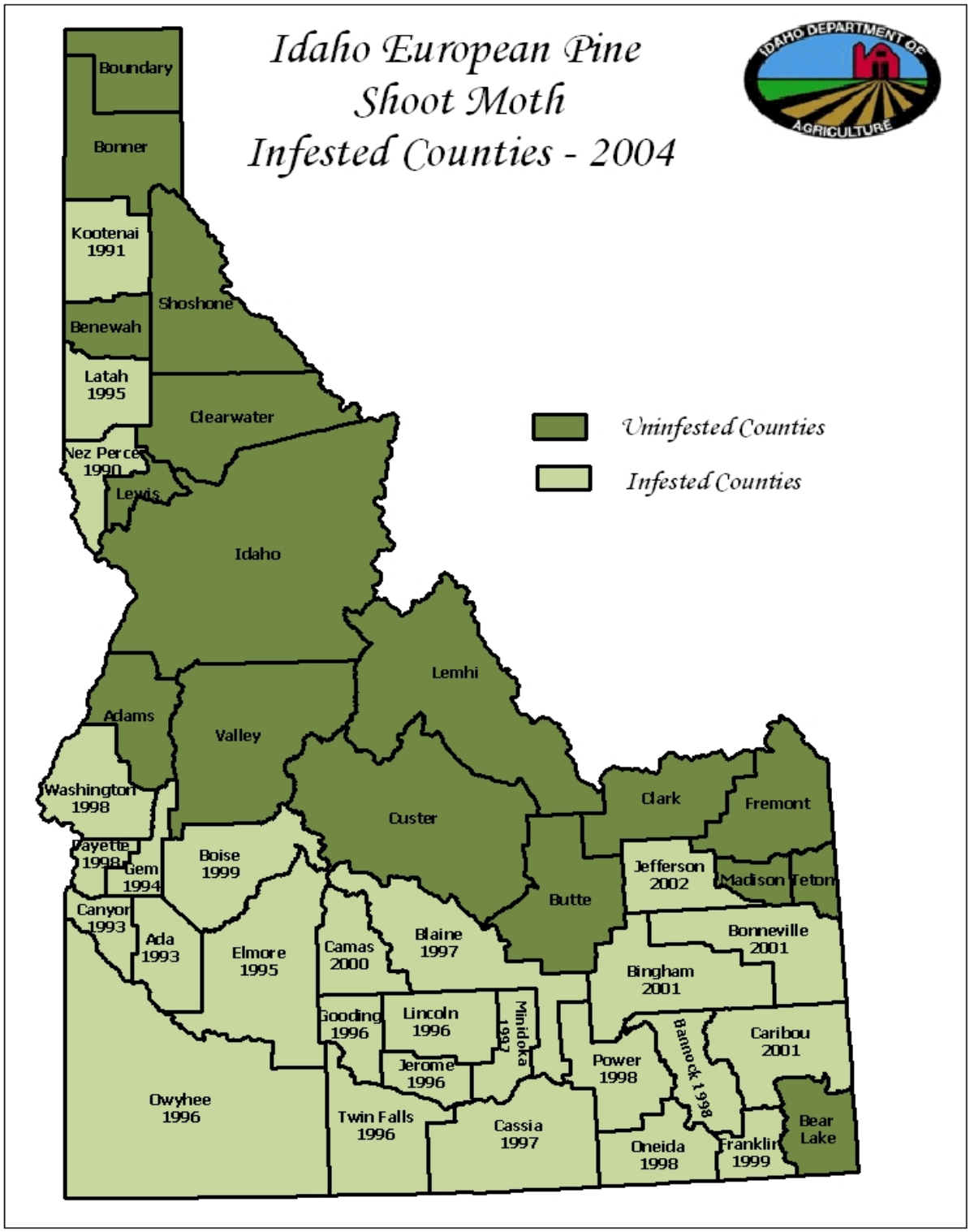
ISDA SEED LAB YEAR END SUMMARY

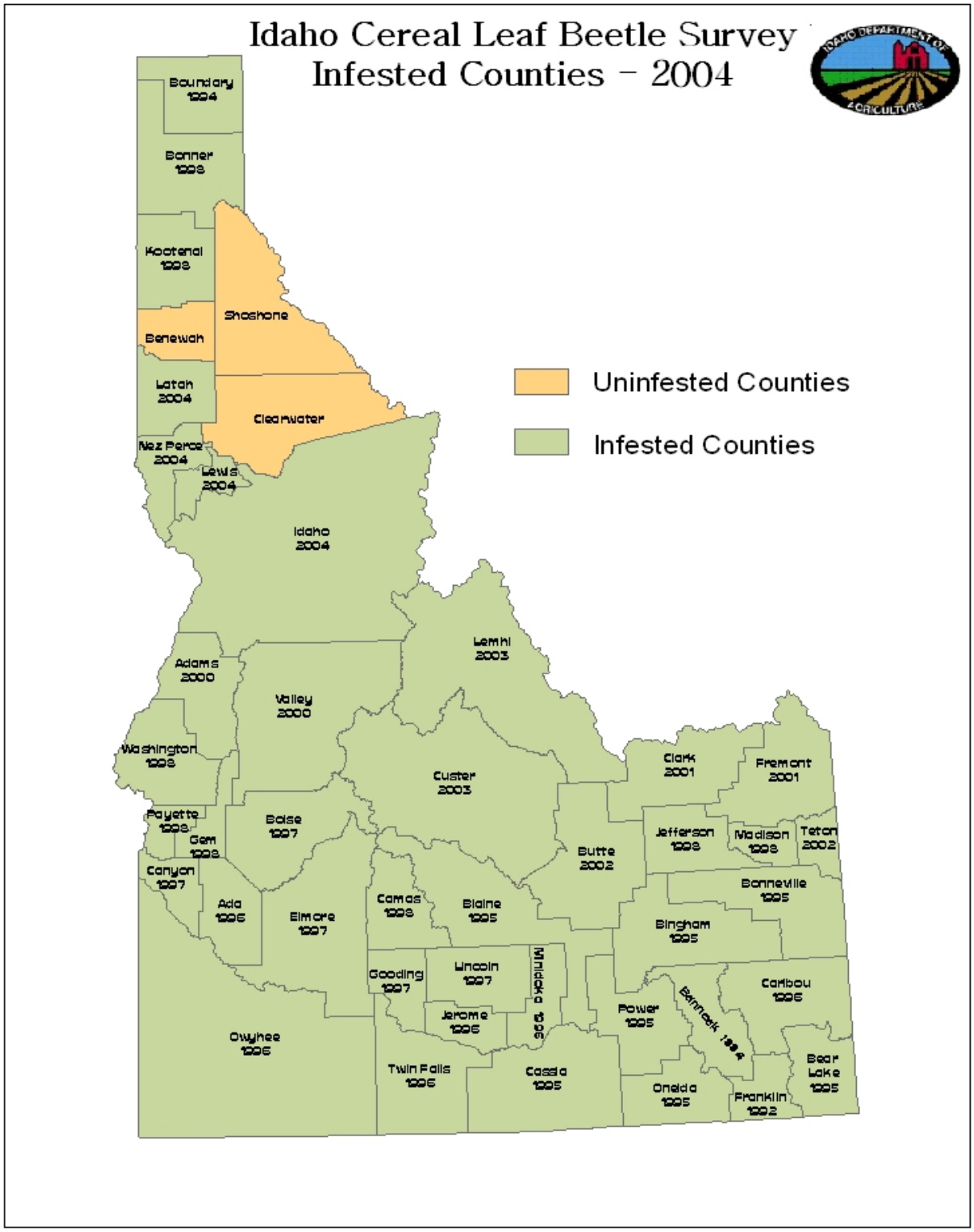
Fiscal year 2004 was a difficult year for the Idaho State Seed Laboratory due to the continued reduction in service samples by 18 percent from the prior year. Total service samples received in FY2004 equaled 6,758 samples. The seed laboratory staff worked in pathology, insect trapping, noxious weeds, feed microscopy and other projects during the summer months. A seed analyst for germination became the new Technical Records Specialist in the front office. In Fiscal Year 2004, the Pure Harvest Computer program was obtained to allow customers internet access to their test data. A trial period with a small set of customers had an excellent response. Due to these results, Pure Harvest went on line for all our seed lab customers at the start of Fiscal Year 2005.

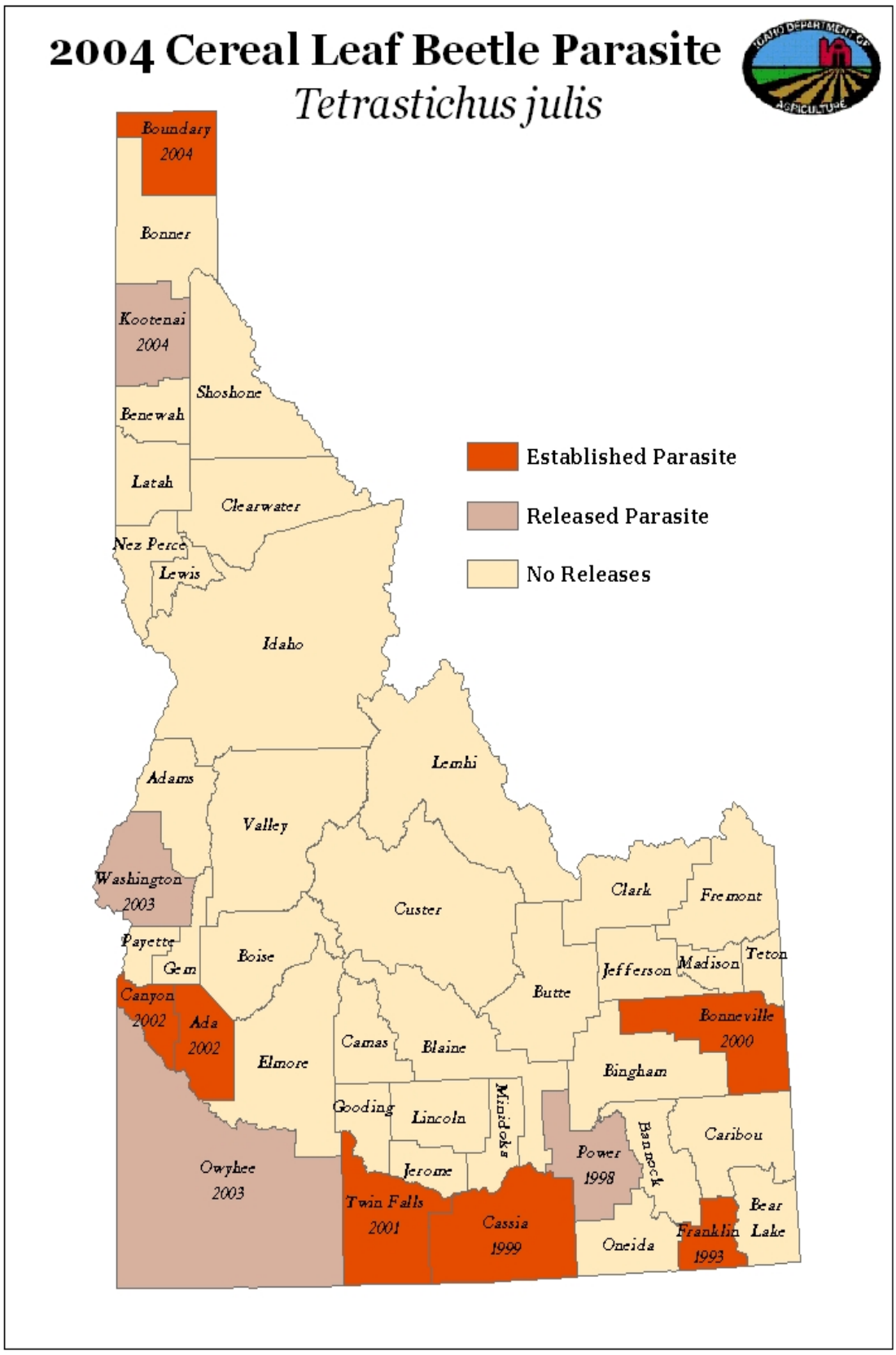
*** - Indicates a program carried out under State/Federal funding. Those not marked with an asterisk were carried out under state funding only.**

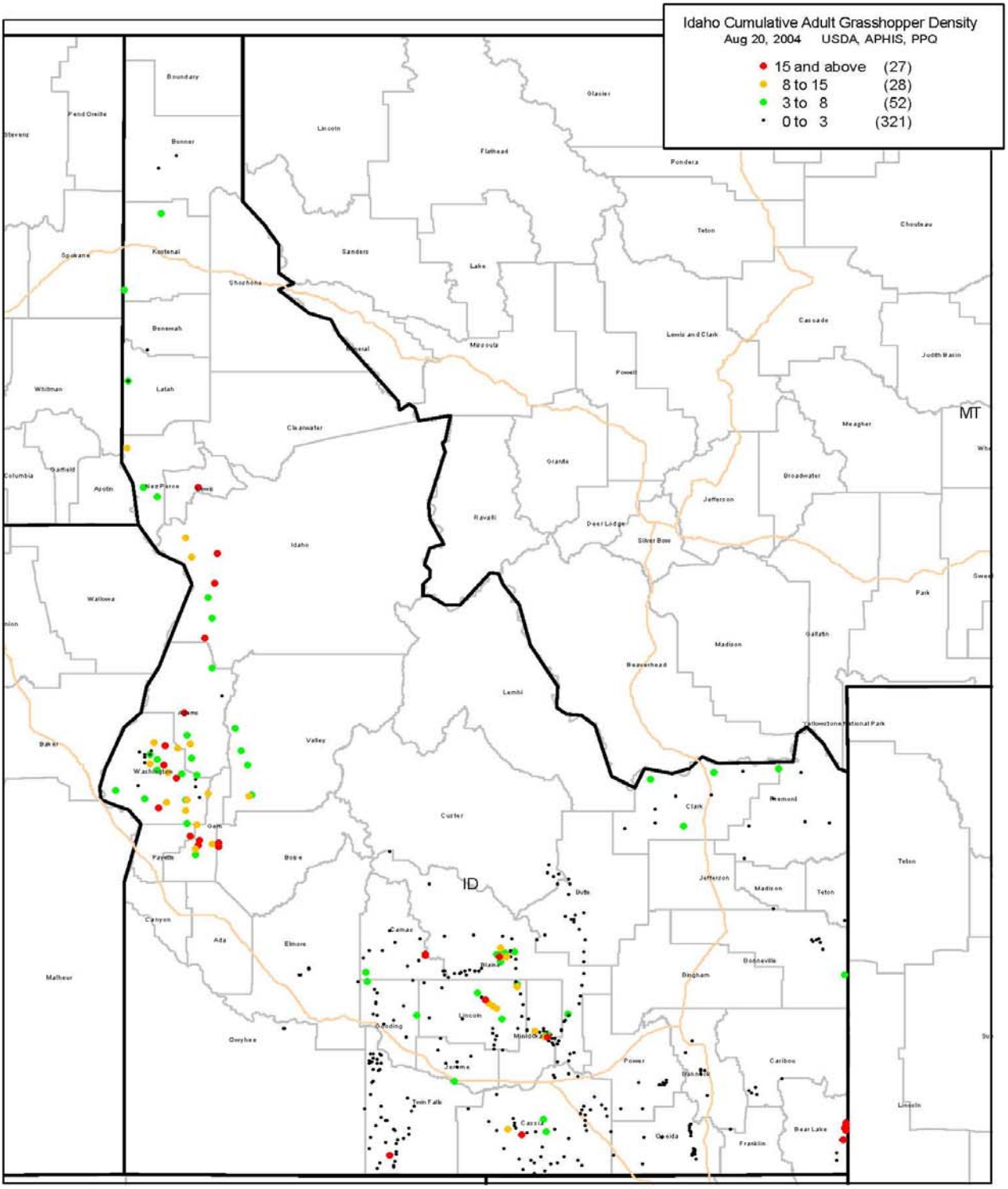
Prepared by: Ben Simko, Program Manager, Division of Plant Industries, Idaho State Department of Agriculture, P.O. Box 790, Boise Idaho, 83701, Telephone: (208) 332-8620, Fax: (208) 334-2283, E-mail: bsimko@idahoag.us

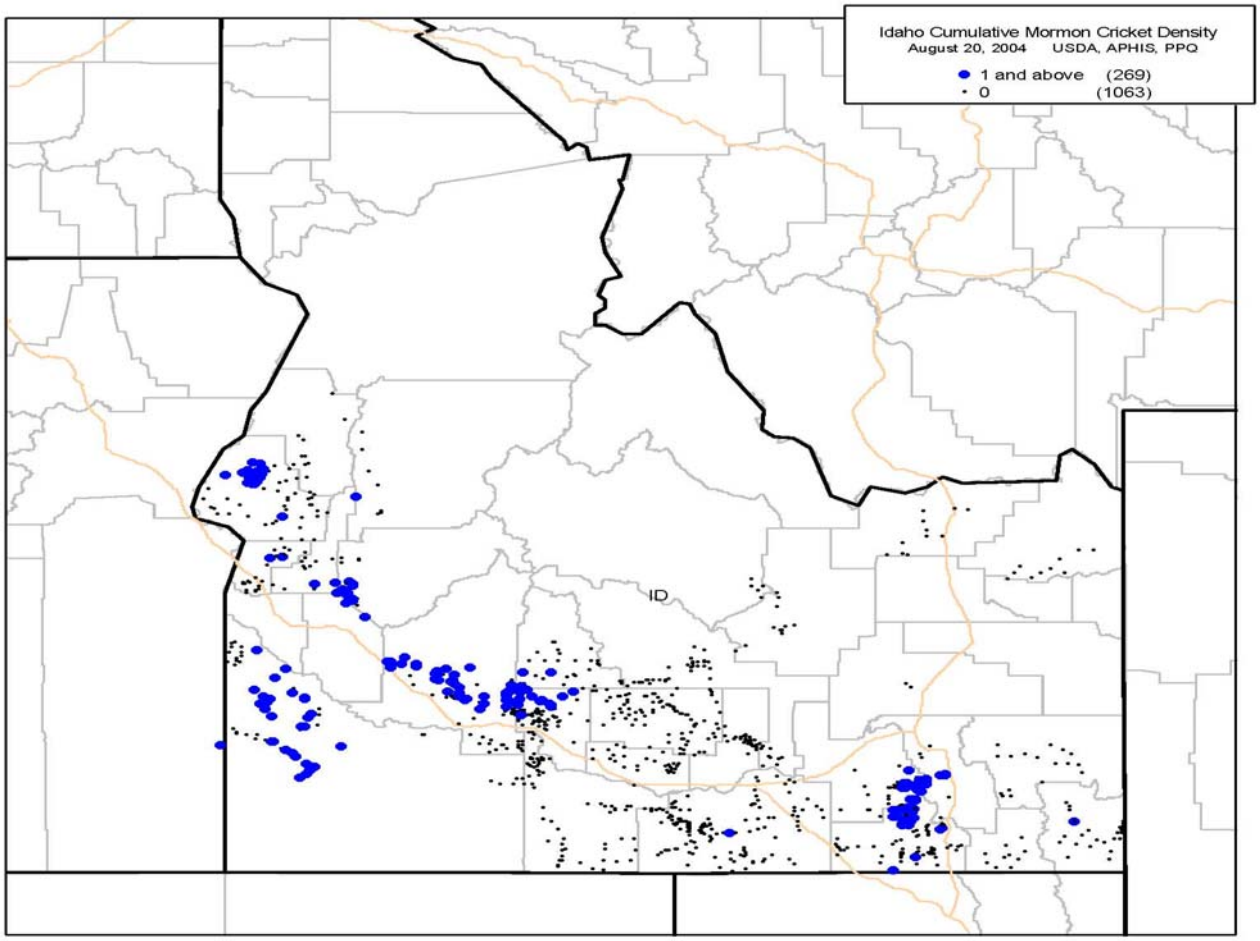

Idaho Haanchen Barley Mealbug
Infested Counties - 2003
Idaho State Department of Agriculture and
University of Idaho Data - 2003
Uninfested Counties
Infested Counties
Boundary
Bonner
Kootenai
Shoshone
Benewah
Latah
Clearwater
Nez Perce
Lewis
Idaho
Lemhi
Adams
Valley
Washington
Custer
Clark
Fremont
2003
Payette
Gem
Boise
Jefferson
2003
Madison
2003
Teton
2003
Canyon
Ada
Elmore
Camas
Blaine
Butte
Bonneville
2003
Bingham
2003
Caribou
2003
Power
2003
Bannock
2003
Lincoln
Minidoka
Gooding
Jerome
Owyhee
Twin Falls
Cassia
Oneida
Franklin
Bear Lake


Idaho European Pine Shoot Moth Infested Counties - 2004
IDAHO DEPARTMENT OF AGRICULTURE
Uninfested Counties
Infested Counties
Boundary
Bonner
Kootenai 1991
Shoshone
Benewah
Latah 1995
Clearwater
Nez Perce 1990
Lewis
Idaho
Lemhi
Adams
Valley
Washington 1998
Custer
Clark
Fremont
Payette 1998
Gem 1994
Boise 1999
Jefferson 2002
Madison
Teton
Butte
Canyon 1993
Ada 1993
Elmore 1995
Camas 2000
Blaine 1997
Bonneville 2001
Bingham 2001
Gooding 1996
Lincoln 1996
Minidoka 1997
Caribou 2001
Power 1998
Bannock 1998
Jerome 1996
Owyhee 1996
Twin Falls 1996
Cassia 1997
Oneida 1998
Franklin 1999
Bear Lake


Idaho Cereal Leaf Beetle Survey
Infested Counties – 2004
Uninfested Counties
Infested Counties
Boundary 1994
Bonner 1998
Kootenai 1998
Shoshone
Benewah
Latah 2004
Clearwater
Nez Perce 2004
Lewis 2004
Idaho 2004
Lemhi 2003
Adams 2000
Valley 2000
Washington 1998
Custer 2003
Clark 2001
Fremont 2001
Payette 1998
Gem 1998
Boise 1997
Jefferson 1998
Madison 1998
Teton 2002
Canyon 1997
Butte 2002
Bonneville 1995
Ada 1996
Elmore 1997
Camas 1998
Blaine 1995
Bingham 1995
Gooding 1997
Lincoln 1997
Minidoka 1995
Caribou 1996
Jerome 1996
Power 1995
Bannock 1994
Owyhee 1996
Twin Falls 1996
Cassia 1995
Oneida 1995
Franklin 1992
Bear Lake 1995


2004 Cereal Leaf Beetle Parasite
Tetrastichus julis
Established Parasite
Released Parasite
No Releases
Boundary 2004
Bonner
Kootenai 2004
Shoshone
Benewah
Latah
Clearwater
Nez Perce
Lewis
Idaho
Lemhi
Adams
Valley
Washington 2003
Custer
Clark
Fremont
Payette
Gem
Boise
Jefferson
Madison
Teton
Canyon 2002
Ada 2002
Butte
Bonneville 2000
Camas
Blaine
Elmore
Bingham
Gooding
Lincoln
Minidoka
Caribou
Power 1998
Bannock
Owyhee 2003
Jerome
Twin Falls 2001
Cassia 1999
Oneida
Franklin 1993
Bear Lake


Idaho Cumulative Adult Grasshopper Density
Aug 20, 2004 USDA, APHIS, PPQ
15 and above (27)
8 to 15 (28)
3 to 8 (52)
0 to 3 (321)
MT
ID


Idaho Cumulative Mormon Cricket Density
August 20, 2004 USDA, APHIS, PPQ
1 and above (269)
0 (1063)
ID